UNITED NATIONS SYSTEM

ACC

ACC/1992/28
15 January 1993

Administrative Committee
on Coordination

ENGLISH ONLY

REPORT OF THE AD HOC INTER-AGENCY MEETING ON OUTER SPACE ACTIVITIES

(UNESCO headquarters, Paris, 5-7 October 1992)

I. MATTERS BROUGHT TO THE ATTENTION OF THE ADMINISTRATIVE COMMITTEE ON COORDINATION

1. In accordance with the task assigned to it by the Administrative Committee on Coordination (ACC), the Ad Hoc Inter-Agency Meeting on Outer Space Activities considered the items on its agenda. Activities requiring coordination were reviewed, and several matters of mutual interest relating to programming of activities were discussed, with a view to avoiding duplication. In considering the inter-agency machinery for consultation and coordination of efforts in the area of applications of space technology, the participants were of the view that the existing machinery had worked satisfactorily for that purpose and that, consequently, there were no major organizational or procedural questions at the current stage that should be brought to the attention of ACC for immediate instructions or guidance.

2. In view of the importance of future coordination, particularly in connection with the implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE 82) and the implementation of Agenda 21 recommendations of the United Nations Conference on Environment and Development (UNCED), 1/ the participants wished to bring to the attention of ACC, for its consideration, the future programmes of work (see paras. 30 and 44 to 47 below).

93-03381 4026b (E) 260193 260193

/...

II. SPECIFIC QUESTIONS CONSIDERED AT THE MEETING

A. Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space (agenda item 4)

B. Coordination of plans and programmes and exchange of views on current activities in the practical applications of space technology and related areas (agenda item 5)

1. Discussion of current and future plans of common interest, including consideration of the actual activities of United Nations organizations in the area of space science and technology and its applications as these relate to their mandated programmes (agenda item 5 (a))

3. It was decided to consider agenda items 4 and 5 (a) together.

4. The Chief of the Office for Outer Space Affairs of the United Nations Secretariat, the Expert on Space Applications and the Secretary of the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space informed the Meeting of the progress made by the Committee on the Peaceful Uses of Outer Space and its subcommittees in implementing the recommendations of UNISPACE 82, and other matters of inter-agency interest.

5. The representatives of other organizations reported on their current activities and plans for 1993, 1994 and future years, including their efforts in connection with the implementation of the recommendations of UNISPACE 82. An exchange of views followed regarding how best to coordinate future activities to implement further the relevant recommendations of UNISPACE 82. The participants noted that the organizations present were continuing the implementation of those recommendations relevant to them, most of which were being implemented as part of ongoing programmes.

6. The representatives also noted with appreciation the strong emphasis given by the General Assembly and the Committee on the Peaceful Uses of Outer Space to the importance of cooperation within the United Nations system in implementing the recommendations of UNISPACE 82. They agreed to continue giving detailed consideration to those recommendations, particularly those relating to the specialized agencies and other organizations of the United Nations system, and to keep the Committee on the Peaceful Uses of Outer Space informed on the progress made in that area.

7. The Meeting noted the recent developments at the World Administrative Radio Conference (WARC-92) with regard to Mobile Satellite Service in Low Earth Orbit (LEO). The Meeting further noted that the Mobile Satellite Service would have co-primary status with Meteorological Satellite Service using the Automated Picture Transmission (APT) from polar-orbiting

meteorological satellites. The Meeting expressed concern at the possibility of interference between these services, especially in developing countries. The Meeting reaffirmed the importance of the APT service for developing countries as a low cost and sometimes means of access to environmental satellite data. The Meeting further stressed that the current APT service must not suffer any degradation when the Mobile Satellite Service became operational. The members of the Meeting agreed to request their respective agencies to notify agency members of these concerns and ask agency members to strongly encourage resgistration of earth receiving stations with national postal, telephone and telegraph administrations (PTTs) and through them with the International Frequency Regulation Board (IFRB). The question of intereference should also be raised at the appropriate International Radio Consultative Committee (CCIR) Study Group 7 meetings on meteorological satellite systems.

8. The Meeting noted with interest that the World Health Organization (WHO) was supporting the uses of the low-orbit satellite known as SATELLITE for E-mail and for access to international health and medical literature services by medical schools and health care institutions in areas with poor telecommunication infrastructure. So far, the earthstations - which cost less than US$ 15,000 including installation and training - were operational in six African countries. Plans were being implemented to install similar earthstations in a few countries of the Eastern Mediterranean region of WHO. The Meeting noted the offer of WHO to share the experience with other interested organizations of the United Nations system.

2. Consideration of matters to be included in the integrated report of the Secretary-General on the programmes of work of United Nations organizations (agenda item 5 (b))

9. The Meeting had before it the draft annual report of the Secretary-General entitled "Coordination of outer space activities within the United Nations system, programmes of work for 1993, 1994 and future years". The report was the eighteenth to be submitted to the Scientific and Technical Subcommittee on the Peaceful Uses of Outer Space, in which information from organizations within the United Nations system was presented in an integrated form, outlining planned activities by fields of application.

10. The participants noted that, in accordance with the agreement reached during its session in 1984, the draft report currently consisted of two sections: the first containing a summary of major planned activities and programmes, without reference to the organizations concerned, and the second containing a description of the future programmes of the individual organizations concerned, as in past reports (see ACC/1984/PG/8, para. 13).

11. The draft report contained information on activities and programmes involving the applications of space technology in the fields of remote sensing of the earth, communications, meteorology, navigation, disaster management and other related fields. It highlighted activities carried out jointly by the

organizations concerned through cooperative programmes, as well as those carried out separately within their respective areas of competence. Those activities ranged from assistance in education and training through fellowships, training workshops and seminars, to expert services and survey missions to the countries concerned, and the dissemination of information on the status of technology in each of the areas referred to above. The participants noted that planned activities reflected part of the efforts of organizations to implement the recommendations of UNISPACE 82.

12. The draft report was discussed in detail, and a number of suggestions and comments were made. They will be incorporated in the final text, to be submitted by the Secretary-General to the Scientific and Technical Subcommittee at its thirtieth session, in 1993, in document A/AC.105/524.

C. In-depth review of cooperation by organizations of the United Nations system in remote-sensing activities (agenda item 6)

13. In its consideration of the matter, the Meeting addressed a number of issues, including a brief evaluation of activities supported by the United Nations system in the developing countries. The Meeting focused on what should be the emphasis of such support in the future. Issues addressed in that context included: (a) conferences, workshops and seminars on the applications of new and advanced systems; (b) training and education programmes; (c) institution-building; (d) project formulation and execution; (e) exchange of information; and (f) other areas of inter-agency cooperation.

14. The Meeting noted that during the 1990s more reliable information on land-use and vegetation cover would be required for planning sustainable agriculture development. For that purpose the Meeting had decided at its previous session, held in 1991, that an inter-agency regional project should be proposed, for the benefit of developing countries, with special focus on Africa and the least developed countries (the output of which would be vegetation land-use mapping, based on geometrically controlled, contrast-enhanced satellite imagery); and that the project should become the basis for on-the-job training in remote-sensing applications, as well as an additional effort to strengthen the national-level Geographic Information Services (GIS), which used, inter alia, information obtained from remote-sensing data analysis as inputs with multidisciplinary layers of interpretation, in areas such as forestry, moisture occurrence, infrastructure, pasture and broad land use. In that connection, the Food and Agriculture Organization of the United Nations (FAO) had prepared a draft project document, which was distributed among interested United Nations organizations for comments and possible cooperation in fund-raising.

15. In reviewing the draft project document with the aim of finalizing the project, the Meeting expressed support for its objectives. The Meeting noted that the Economic Commission for Africa (ECA), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations

Environment Programme (UNEP) had expressed interest in cooperating with FAO to participate in the project, which would be implemented at the African Regional Remote-Sensing Centres in Nairobi; Ile-Ife, Nigeria; and Ouagadougou. When completed, this project would provide reliable information on vegetation cover and land use, at scales ranging from 1:200,000 to 1:1 million, for the whole of Africa. At the beginning of 1993, FAO, in cooperation with ECA, would organize a project preparatory meeting at the Regional Centre for Surveying, Mapping and Remote Sensing, in Nairobi, to which relevant AFrican institutions, United Nations bodies and prospective donors would be invited.

16. The Meeting had before it a detailed project document on the proposed establishment of United Nations Centres for Space Science and Technology Education (CESSATEs) in existing national/regional education centres. The Meeting noted that these centres would enhance the capabilities of developing countries to meet national and regional needs. Such centres, it was noted, would focus on the education of educators, with a view to expanding the knowledge of space science and technology at the local level, by introducing relevant aspects of technology into existing curricula in the educational institutions of developing countries. The Meeting had before it a note which summarized the objectives and programmes of the Centres. It was briefed on the activities undertaken by the Office for Outer Space Affairs towards the establishment of the regional centres, and the results of an evaluation mission to Latin America in May 1992, undertaken by experts from Canada and Spain, as well as the United Nations. Further evaluation missions to other regions would be carried out as soon as funding sources had been identified.

17. The Meeting also had before it a note on proposals by UNESCO for the establishment of Satellite Data Centres (SDCs) and by UNEP for the establishment of a regional centre in Latin America in the context of its Earthwatch programme. The Meeting was briefed on the proposals and plans for establishing the centres.

18. The Meeting had a detailed discussion on the proposed establishment of the above-mentioned Centres (CESSATEs, SDCs and UNEP-Global Resources Information Database (GRID)) with a view to possible coordination. It noted that the rationale for the three types of proposed centres were different but complimentary.

19. The Meeting noted that such a UNEP centre would be an additional node of the already operational GRID system, which was designed for the enhancement and maintenance of environmental assessment and data-management information systems, and for networking at the regional levels in the context of the Earthwatch programme. The Earthwatch programme itself was the United Nations system-wide mechanism for the coordination of environmental assessment to provide, inter alia, early warning of environmental change through the analysis of monitoring data, and thus guide effective and rational management of natural resources and the environment at regional levels. The meeting noted, on the other hand, that the objective of the proposed UNESCO Satellite Data Centres was to establish an infrastructure for remote-sensing applications, in order to assure natural resource management and economic

planning in the most cost-effective manner at the national level. This was to be done by establishing national archives of remotely sensed land data for national economic planners and resource managers, and by offering them interactive analysis of remotely sensed data, data-processing systems and expertise. Considering that the UNEP-GRID/SDCs would be particularly designed to further the activities of the trainees of CESSATEs in their respective countries, the programmes of the proposed UNEP-GRID/SDCs and CESSATEs should be harmonized.

20. The Meeting further noted that the proposed United Nations Centres for Space Science and Technology Education (CESSATEs) would be established in order to build the needed capacities in the developing countries. The latter would need a highly educated core of (i) specialists who could provide appropriate education in the main areas proposed in the Brundtland 2/ and Agenda 21 reports; (ii) research and application programmes that could address the various aspects of Agenda 21 and global change research; (iii) environmental information for the execution of these activities; and (iv) tools such as GIS, which could could facilitate the analysis of large volumes of diverse information for both policy formulation and applications. The operations in each of the Centres would require a variety of data, including those from Earth observation systems. Thus a component of each CESSATE would be a data-management unit. The latter should not develop data archives except for the data that were acquired/received for the work programme of each Centre. Every effort would be made to harmonize the activities of the CESSATEs/UNEP-GRID/SDCs and the existing remote-sensing training and user-assistance centres. The Centres were designed to be housed in existing national or regional educational institutions. The CESSATEs should eventually develop and operate educational programmes in all aspects of space science and technology. However, in view of the priorities articulated by Agenda 21, the initial activities of these Centres should focus on environmental information systems (remote-sensing and satellite meteorology), including GIS, as essential tools in national development programmes.

21. Having reviewed carefully the different objectives of the above Centres, the Meeting expressed its support for the establishment of the Centres. However, several representatives suggested that these Centres should be established in close collaboration with existing regional remote-sensing centres, in order to complement and make use of existing capabilities, and also to strengthen them. Noting the importance of the existing regional remote-sensing centres in Africa, the Meeting called for support for these centres.

22. It was further noted that while there was a good prospect for cooperation between existing and new Centres, there was also the possibility of duplication of data management, which should be avoided. Concern was also expressed at the cost involved in data collection and distribution. Suggestion was made that the data provided by the Centres should be user-friendly, to facilitate its use by user agencies. Some agency representatives indicated that, although they would be able to participate in the programmes of the Centres by providing expertise and services, this would be at the cost

of the Centres themselves, as their own agencies would not have additional funding to support the activities of the proposed Centres.

23. With regard to the question of data management, the Meeting discussed the formatting of satellite data by the proposed SDCs on the basis of a working paper (see annex I), and decided to further elaborate on the matter at its next session.

24. As to location, the Meeting was informed that in the case of CESSATEs, the choice of location depended on the interest of countries who had offered to host the Centres, and that all efforts were being made to ensure the financial stability of the Centres by requiring (i) greater financial commitments, particularly from the host and benefiting countries; and (ii) financial, material and personnel support from the donor countries and funding agencies.

25. The Meeting welcomed the invitation of ECA to all agencies represented at the meeting to join efforts with the Commission for the United Nations Regional Conference on Cartography, to be convened in February 1993, by preparing and submitting background papers. It was emphasized that this Regional Conference represented a unique forum for the exchange of ideas and information on recent trends in remote sensing, as well as the present status of knowledge, development and application in the various countries and subregions of the continents. In particular, it offered the best opportunity for African participants to interact with their counterparts from the developed world, and provided an excellent platform to lay down contacts for bilateral and multilateral negotiations and technical assistance, which African institutions, both regional and national, badly needed. The Meeting noted that the FAO project on "land and vegetation cover map of Africa", the project "Regional Centre for Space Science Education" of the United Nations Office for Outer Space Affairs, and the project "National Satellite Data Centres" of UNESCO, have been proposed to be included in the agenda of the Conference. It was further noted that ECA had invited agencies to contribute to the preparation of a base document for discussion on "guidelines for the establishment of national geographic information systems in Africa", addressing conceptions, structuring and implementation, which will be submitted for adoption by an Ad Hoc Expert Group Meeting on GIS.

26. The Meeting further noted that the discussions of the Conference would lead to resolutions and recommendations which would subsequently be presented for endorsement to the Conference of Ministers of ECA; those adopted would become mandates and would represent a commitment of Member States to assist in their implementation.

27. The Meeting stressed the importance of the continuation of remote-sensing and GIS training activities for developing countries. These consisted of training courses for specialists in agricultural, forestry and water resources disciplines, who should have been using remote sensing and GIS in their work but had not had the opportunity to acquire the necessary knowledge and experience. These courses were always tailored to specific application. They were of two-four weeks' duration and often complemented by a pilot project.

28. The Meeting discussed the matter of access to remotely sensed environmental data and expressed its concern for the increasing tendency to restrict or qualify access to remotely sensed data. The Meeting unanimously agreed that access to such data was a necessary condition to implement both the recommendations of Agenda 21 of UNCED on sustainable development in developing countries and the current programmes sponsored by the organizations of the United Nations system. Accordingly, the existing conditions under which data were provided to programmes sponsored by the organizations of the United Nations system should be maintained. With this in view, it was agreed that a set of requirements should be developed outlining the basis upon which data should be available to such programmes. An informal paper outlining the requirements was before the Meeting and there was a preliminary exchange of views. The Meeting agreed to discuss the requirements contained in the paper with a view to finalizing them at its next session.

29. The Meeting agreed that the working papers submitted to it and the discussions during the course of its consideration of the matters relating to remote sensing had identified several important points to be discussed at future meetings. It was noted that discussions should continue on those points and other selected issues because, unlike other emerging areas of technology, such as space manufacturing, the benefits of which were not yet apparent as far as developing countries were concerned, remote sensing was definitely an important tool for developing countries. Further, it was noted that, while many agencies and organizations of the United Nations system were interested in remote-sensing activities, including relevant early warning activities, there was no coordinated mechanism responsible for remote-sensing activities as a whole, apart from the Inter-Agency Meeting on Outer Space Activities.

30. Therefore, the Meeting agreed that the in-depth review of the cooperation of organizations of the United Nations system in remote-sensing activities should be continued at its next session. In that connection, the Meeting decided that the matters of inter-agency concern mentioned in paragraphs 23 and 28 above should be further reviewed at its next session.

D. Review and coordination of follow-up activities of the organizations of the United Nations system on International Space Year 1992 (agenda item 7)

31. The participants noted that the Committee on the Peaceful Uses of Outer Space and its Scientific and Technical Subcommittee had held special sessions to mark International Space Year (ISY) 1992 in accordance with General Assembly resolution 46/45 of 9 December 1991. They also took note of the wide variety of activities, already undertaken or planned for the remainder of the Year by the various organizations of the United Nations system, including the activities coordinated through the Space Agency Forum on International Space Year (SAFISY).

32. The Meeting noted that the Committee on the Peaceful Uses of Outer Space

had urged international organizations and other funding sources to support further scientific and technical activities and to actively encourage the continuation of activities initiated for ISY and increase the involvement of more nations in those activities.

33. The Meeting, noting that SAFISY at its last meeting, held during the World Space Congress, had decided to continue its programme beyond the International Space Year as the Space Agency Forum (SAF), under a new mandate to be decided upon at a meeting in Genoa in February 1993, expressed the hope that United Nations agencies which had affiliate status with SAFISY would continue to have similar status with SAF.

E. Other matters (agenda item 8)

1. Follow-up to UNCED

34. The Meeting noted the preparation of interdisciplinary remote-sensing programmes by several agencies, especially on the study and monitoring of the environment. These activities were also important in view of the recommendations of the recently held United Nations Conference on Environment and Development (UNCED), which took place in Rio de Janeiro, Brazil, from 3-14 June 1992. 1/

35. The Meeting reviewed the agency programmes in the light of Agenda 21, adopted by UNCED. Agenda 21 had provided the framework of a coordinated international effort to implement new sustainable development policies which would safeguard the basic heritage of mankind and the quality of the Earth's environment for future generations. Satellite remote sensing would have a unique role in contributing to implementation of Agenda 21, since it provided the only means for continuous global monitoring of changes on the surface of the Earth and in its atmosphere. Similarly, satellite communication networks would provide real time regional and global links, thus facilitating the exchange of information and transfer of data required for solution of Agenda 21 tasks. Based on the above considerations and in view of the support required for implementation of Agenda 21 by satellite remote sensing and space communication, the Meeting decided to include reporting on activities related to implementation of Agenda 21 on the agenda of its future sessions.

36. The Meeting noted that the Second World Climate Conference, held in Geneva in 1990, had recommended the formation of a Global Climate Observing System. The World Meteorological Organization (WMO), the Intergovernmental Oceanographic Commission (IOC) of UNESCO, the International Council of Scientific Unions (IGSU) and, recently UNEP had agreed to cooperate in organizing a joint "Global Climate Observing System" (GCOS) planning activity through a Memorandum of Understanding. The meeting further noted that:
(a) GCOS was intended to acquire comprehensive information on the properties and evolution of the Earth's climate system, for detecting climate change, supporting climatological applications for economic development, and developing climate-system science and predictions. The GCOS was therefore

meant to serve the needs of the International Geosphere Biosphere Programme (IGBP); (b) the Memorandum of Understanding also called for the constitution of a Joint Scientific and Technical Committee (JSTC) to define the scope of GCOS, which would (i) identify observational requirements; (ii) review and assist the development and implementation of GCOS, (iii) facilitate the exchange of information among sponsoring and participating organizations.

37. The Meeting noted that the Second World Climate Conference had also recommended the formation of a Global Ocean Observing System as a basic component of the Global Climate Observing System. The IOC had decided in 1989 to initiate the Global Ocean Observing System and had established the IOC Committee for the Global Ocean Observing System. UNCED in Agenda 21 had indicated that "States should consider ... supporting the role of the IOC in cooperation with WMO, UNEP and other international organizations in the collection, analysis and distribution of data and information from the oceans and all seas, including as appropriate, through the proposed Global Ocean Observing System (GOOS)" (para. 17.103 (b)). The IOC was negotiating with ICSU, WMO and the Scientific Committee for Oceanographic Research (SCOR) on a Memorandum of Understanding on the establishment of a Joint Technical and Scientific Committee for GOOS. The System would allow for coordinated monitoring and subsequent prediction of environmental and climate changes globally, regionally and nationally. As envisaged, this comprehensive and integrated system would provide a mechanism for the coordinated management of data generated from regular satellite and <u>in situ</u> observations of major physical, chemical and biological properties of the ocean, including the coastal zone and enclosed and semi-enclosed seas.

2. <u>Second Space Conference of the Americas</u>

38. The Meeting noted that the Government of Chile was organizing in Santiago the Second Space Conference of the Americas, to be held from 25-29 January 1993, as a follow-up to the Space Conference of the Americas: Prospects of Cooperation for Development, held in San José, Costa Rica, in March 1990, and in order to lend greater relevance to the activities of the International Space Year, and obtain real solutions to the problems of the environment that affect the world and in particular the region. The Meeting was also informed that the Chilean organizers were planning to organize a commercial Expo that would run parallel to the Conference. The agencies might be interested in having a booth in which to display the range of activities which they were conducting, particularly in the Latin America and Caribbean region.

39. The Meeting was informed that, although invitations had also been sent directly by the Government to the agencies, the United Nations had been requested by the Government of Chile to invite the organizations and bodies of the United Nations system involved in activities in space science and technology to participate actively in the Conference and in its follow-up. The Office for Outer Space Affairs of the United Nations proposed to organize a special plenary session of the United Nations system during the first day of

the Conference. This session would serve to discuss ways of coordinating various forms of available resources and assistance possibilities for regional programmes/projects that could benefit Member States of the Latin America and the Caribbean region.

40. The Meeting, while welcoming the holding of the Second Space Conference of the Americas in Santiago de Chile, expressed the opinion that it should have clear and defined objectives, in view of the fact that the results of the First Conference had yet to be implemented. It expressed some concern that, unless a clear set of objectives were defined in advance, the Conference might be of limited value. In this connection, the Meeting noted that a large number of recommendations had been made at the First Conference of the Americas in Costa Rica and a Working Group had later formulated a set of 25 recommendations on a priority basis for implementation; and that the Second Conference in Santiago should have as a clear objective the establishment of a programme to implement the recommendations that had already been identified as priority items. The Meeting noted that the Conference might also wish to further prioritize and reorient the recommendations of the First Conference in the light of the new mandate under Agenda 21 of the UNCED recommendations.

F. Future programme of work

41. The Meeting discussed the ongoing restructuring of the United Nations Secretariat and the possible implications it might have for the work of United Nations bodies involved in space activities.

42. The participants noted with satisfaction the close spirit of cooperation that existed throughout the deliberations and the consultations carried out during the Meeting, which could enhance the coordination of outer space activities within the United Nations system.

43. The Meeting reiterated the importance of continuing its meetings on an annual basis, in order to better coordinate activities relating to outer space within the United Nations system. In that connection, the Meeting also noted that, owing to the work carried out by the Inter-Agency Meeting, the concerns expressed by various intergovernmental committees, particularly the Committee on the Peaceful Uses of Outer Space, relating to the duplication of efforts in the work of various organizations of the United Nations system, had been satisfactorily dealt with and that those committees had positively commented on the work of the Inter-Agency Meeting in their recent reports.

44. The participants considered the need for further inter-agency consultation on, and coordination of, the activities and programmes of the organizations of the United Nations system, particularly in view of the implementation of the recommendations of UNISPACE 82 and the follow-up activities to be undertaken in response to Agenda 21. The participants therefore agreed to recommend to ACC that the next Ad Hoc Inter-Agency Meeting on Outer Space Activities be held during the latter part of 1993, with the following major items on its provisional agenda:

1. Implementation of the recommendations of the Second United Nations Conference on the Exploration and Peaceful Uses of Outer Space.

2. Implementation of the recommendations of Agenda 21.

3. Coordination of plans and programmes and exchange of views on current activities in the practical applications of space technology and related areas:

   (a) Discussion of current and future plans of common interest, including consideration of the actual activities of United Nations organizations in the area of space science and technology and its applications as they relate to their mandated programmes;

   (b) Consideration of matters to be included in the integrated report of the Secretary-General on the programme of work of United Nations organizations.

4. In-depth review of the cooperation of organizations in the United Nations system in remote-sensing activities:

   (a) Satellite-data formatting in connection with the proposed establishment of Satellite Data Centres (SDCs);

   (b) Remote-sensing data policy for requirements of the organizations of the United Nations system.

5. Coordination of follow-up activities of the organizations of the United Nations system on International Space Year 1992.

6. Other matters.

45. The participants agreed that they should continue their in-depth review of cooperation among the organizations of the United Nations system in some specific areas of space applications, in order to ensure that the activities of the United Nations system in those areas were meaningfully integrated and the services rendered to Member States fully met their requirements in an efficient and cost-effective manner.

46. In view of the importance of the ongoing review process, the participants considered it essential that all organizations concerned, particularly those dealing with remote sensing, attend at the next Ad Hoc Inter-Agency Meeting on Outer Space Activities.

47. In view of the fact that most of the interested organizations were based in Europe, it was suggested that the next Meeting be held in Europe, for three days during the last week of September and the first week of October 1993. In that connection, the Meeting noted with appreciation the invitation of ITU to act as host for the next Meeting, at its headquarters in Geneva, and requested

the United Nations Secretariat to consult with ITU on the matter. The Meeting also agreed that its 1994 session should be held at WMO headquarters in Geneva and invited WMO to make the necessary arrangements to host the Meeting.

III. ORGANIZATIONAL MATTERS

48. The Ad Hoc Inter-Agency Meeting on Outer Space Activities was held at UNESCO headquarters from 5 to 7 October 1992. Mr. R. Missotten of UNESCO was elected Chairman. The list of participants is contained in annex II of the present report.

49. On behalf of the Director-General of UNESCO, the Director of the Division of Basic Sciences welcomed the participants. He gave an overview of the work of UNESCO, focusing on its new communications strategy and contribution to infrastructure-building and communication training in developing countries relating to space activities. He also outlined UNESCO activities in remote-sensing research and transfer of knowledge, particularly in the framework of international programmes on basic and engineering sciences, international programmes on Man and the Biosphere (MAB), the International Hydrological Programme (IHP), the International Geological Correlation Programme (IGCP), and the programmes of the Intergovernmental Oceanographic Commission (IOC). He further elaborated on the importance of system-wide interdisciplinary cooperation in carrying out programmes related to the follow-up of ISY and UNCED.

50. The Meeting expressed its warm appreciation and gratitude to UNESCO for acting as host. The Meeting also expressed appreciation to the Office for Outer Space Affairs and its Chief for the preparations and the Secretariat support of the Meetings, which contributed significantly to the strengthening of cooperation within the United Nations system.

51. The Meeting expressed its gratitude to the European Space Agency (ESA) for its invitation to visit its facilities at its headquarters in Paris during the course of the Meeting, and for reviewing ESA activities of interest to the United Nations, which the participants found very useful in planning their future programmes.

Notes

1/ See A/CONF.151/26/Rev.1 (vol. I).

2/ A/42/427.

Annex I

FORMATTING OF SATELLITE DATA BY THE PROPOSED SATELLITE DATA CENTRES (SDCs) OF UNESCO: WORKING PAPER

The available data should be in "user-friendly" format(s) in two aspects:

The first concern is to make available to potential users the information concerning existing satellite data sets, be it at a continental, regional, national or subnational level. This means providing users with "meta-data", presumably in a database, so that they can examine the relevant information on-line in a sort of electronic data catalogue.

The second concern is to provide the actual satellite data in a form which is readily usable. This implies a certain amount of re-formatting by the proposed "Satellite Data Centres", before the data can be passed on to potential users. Satellite data could also be geo-referenced for further use within a geographic information system (GIS).

The goals mentioned above will involve significant work of ever-increasing magnitude. The following is a list of the simplest to the most difficult tasks implied by the above.

1. Entry of satellite data descriptive attributes to:

   (a) Some list (analog form, as a minimum);

   (b) Electronic catalogue;

   (c) Database format.

2. Pre-processing of satellite data:

   (a) Re-formatting from original tapes to other medium or media (hard disk, diskette, CD-ROM etc.);

   (b) Re-formatting to "simpler" formats for users; e.g. so-called flat files and/or data subsets;

   (c) Application of specific algorithms to original, raw parameters (veg. index) etc.

3. Geo-coding of Satellite Data:

   (a) Geometric corrections;

   (b) Precision geo-referencing to some agreed upon coordinate system; e.g. latitude/longitude

4. Entry of Satellite Data to GIS.

Annex II

LIST OF PARTICIPANTS

Chairman: R. MISSOTTEN (United Nations Educational, Scientific and Cultural Organization)

Secretary: N. JASENTULIYANA (United Nations)

United Nations	
Office for Outer Space Affairs	A. A. Abiodun
Office of Legal Affairs	S. Basnayake
Economic Commission for Africa	O. Nino-Fluck
United Nations Environment Programme-Global Resources Information Database	R. G. Witt
Specialized agencies	
Food and Agriculture Organization of the United Nations	Z. D. Kalensky
United Nations Educational, Scientific and Cultural Organization	V. Zharov G. Dupont K. Tokumaru D. Troost J. Withrow A. Aureli M. Clusener-Godt J. Rose V. Kouchnirenko
World Health Organization	S. Mandil
International Telecommunication Union	H. Meyerhoff
World Meteorological Organization	D. Hinsman